Accident / Incident Report Closed

BASF We create chemistry

Unit/Department	Process Area	Site	Report Number
South Operation-Elyria	General Catalyst – Building 16	ELYRIA	0084-SOPS-16-0038
Report Date	**Incident Date**	**Incident Time**	**Copied From**
03/02/2016	03/02/2016	02:00 AM	
Incident Location		**Team Leader / Supervisor**	**Reported By**
Trimer area building 5C		Douglas Stock	Robert Gavalek
Title of Event (Limit to 90 characters)		**Category**	**Division / Bus. Group / Subgroup Code**
Solution leak from Stage #1 tower (seam) shortly after starting up unit.		☐ Safety & Health ☐ Environmental	CC / G-CCP

Incident Classification

☐ Near Miss	☐ Property Loss	☐ Contractor
☐ Process Safety	☐ Citation / NOV	☐ Contractor Injury / Illness
☐ Injury / Illness	☐ Health Exposure	☐ Contract Injury / Illness
☒ Spill / Release	☐ Inspection	☐ PSM
☐ Permit / Regulatory Deviation	☐ Major Incident	☐ Plant Upset
☐ Fire	☐ Non-Occupational	☐ EHS Management System Failure
☐ Odor Complaint	☐ RMP	☐ Other

Describe Event / What Happened

The Trimer had been down to clean the stage 2 and 3 nozzles. At about 2am on 3/2/16 the Trimer was started back up. The blower and recirculation pumps were running but the Chem tank was not in use yet. The stage 1, 2, and 3 tanks had just been refilled after the maintenance work so the solution was mainly water and caustic (sodium hydroxide) at a pH of about 11. After running for about 2 minutes the operators that started the unit heard a loud pop. They observed water leaking from the stage 1 tower and immediately shut the Trimer off. Approximately 5 gallons of solution had leaked from the seam on stage 1 tower (a few feet below the recirculation inlet, even with the 2nd level mezzanine). The solution dripped down around tank #1 and did not cause any damage to equipment or injury.

Immediate Corrective Action or Response

The Trimer was shut off immediately after hearing the popping sound and seeing the water leaking from the stage #1 tower.

Immediate Cause

We were unable to determine what caused the rupture at the seam which led to the leaking solution.

Spill Release Type(s)	Non RQ Spill / Release						
Chemical(s) Involved	CAS #	Phy. State	Air	Land	Water	Contmt	Units
High pH process water with caustic and sulfides	N/A	Liquid	0	0	0	41	lbs

Disposition of Material	Material captured in sump and treated			
Weather Conditions	Skies:	Temperature:	Wind Direction:	Wind Speed:

Cause Narrative

It appears that the scrubber tower recirculation flows and the blower for the Trimer scrubber were started and ran for about 12 minutes. During this time the manual valves to the both RC 1 and RC 4 were closed which dead headed the scrubber (except for any tramp air that may be pulled in through the drops at the scrubber tanks). Most likely the scrubber towers have shown some embrittlement over time due to chemical attack and cycling of temperatures. The dead heading of the scrubber appears to have cracked the tower to the point were water overcame the suction and caused solution to leak through the cracked liner.

Contributing Causes	Root/Primary Causes		
The current startup procedures do not have the requirement to have air vented to the scrubber	111 - Procedures	130 -	136 - Incomplete/Situation Not

at startup		Wrong/Incomplete	Covered
Current no inspection program of the inside of the scrubber towers	28 - Equipment Reliability Program Implementation LTA	36 - Predictive Maintenance LTA	38 - Montoring LTA
A blank was previously installed on the vent air duct This allowed the trimer scrubber to operate under excessive vacuum, resulting in damage to tower 1.	55 - Administrative/Management Systems	72 - Safety/Hazard/Risk Review	74 - Review LTA or Not Performed

Any known or potential off-site impacts?	**No**	PSM Incident?	**No**	Estimated Cost:	**1,200.00 USD**
Investigation Team	**Douglas Stock; Terrence M Vanderbosch; Phillip Wright; Jefferson Lewis; Leon Zavodnik**				

Item	Corrective Action(s) to prevent recurrence	Responsible Person	Target Date	Final Closed Date	VC Req	VE Req
1	Modify calciner walk down sheets to add venting of calciners to the scrubber during startup of the scrubber	Jefferson Lewis/NA/BASF	05/29/2016	05/27/2016	N	N
2	Remove the blank on vent air duct. Restore vent air system to service.	Terrence M Vanderbosch/BASF-CATALYSTS/BASF	05/30/2016	05/27/2016	N	N
3	Develop a training 1-pager to review at the next safety meeting.	Jefferson Lewis/NA/BASF	04/15/2016	04/05/2016	N	N
4	Contact a 3rd party to design an appropriate vacuum-break system to eliminate manual operation of a slide gate on the 1st floor mezzanine.	Lee McClish/NA/BASF	08/31/2016	08/26/2016	N	N

Approved By:	
Manager / Dept. Head	**Leon Zavodnik 04/03/2016 09:38 AM**
EHS Unit Coordinator	**Tim Anglin 03/30/2016 03:35 PM**
Safety & I.H.	**Nancy Gallagher 04/04/2016 12:01 PM**
Team Leader / Supervisor	**Valerie Douglas 04/04/2016 04:19 PM**
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